



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C08F 8/12, 8/00, A61L 15/00</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 99/25745</b> <b>(43) International Publication Date:</b> 27 May 1999 (27.05.99)
<b>(21) International Application Number:</b> PCT/US98/24007 <b>(22) International Filing Date:</b> 11 November 1998 (11.11.98)  <b>(30) Priority Data:</b> 08/974,119           19 November 1997 (19.11.97)   US 09/179,554           28 October 1998 (28.10.98)    US  <b>(71) Applicant:</b> AMCOL INTERNATIONAL CORPORATION [US/US]; One North Arlington, 1500 West Shure Drive, Arlington Heights, IL 60004 (US).  <b>(72) Inventors:</b> MITCHELL, Michael, A.; 440 Pheasant Ridge, Lake Zurich, IL 60047 (US). BEIHOFFER, Thomas, W.; 412 South Belmont, Arlington Heights, IL 60005 (US). LOBO, Leticia, I.; 3905 Firestone Lane, Hoffman Estates, IL 60195 (US). DARLINGTON, Jerald, W., Jr.; 20613 Beth Court, Marengo, IL 60152 (US). ANDERSON, Mark; 500 North Carlton, Wheaton, IL 60187 (US).  <b>(74) Agent:</b> NAPOLI, James, J.; Marshall, O'Toole, Gerstein, Murray & Borun, Suite 6300, 233 South Wacker Drive, Chicago, IL 60606 (US).		<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i>
<b>(54) Title:</b> POLY(VINYLAMINE)-BASED SUPERABSORBENT GELS AND METHOD OF MANUFACTURING THE SAME  <b>(57) Abstract</b>  Poly(vinylamine)-based superabsorbent gels are disclosed. The superabsorbent gels either comprise a mixture of a poly(vinylamine) polymer and an acidic water-absorbing polymer, like polyacrylic acid, or comprise a salt of a poly(vinylamine) polymer. An improved method of preparing poly(vinylamine), and improved diaper cores, also are disclosed.		

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C08F8/12 C08F8/00 A61L15/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C08F A61L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 40 07 310 A (BASF AG) 12 September 1991  see page 3, line 51 - line 63 see page 4, line 16 - line 27 see page 5, line 62 - page 6, line 63 see page 7, line 1 - line 19; claims 1-4 ---	1-10, 12-20
X	DE 42 32 241 A (MITSUBISHI KASEI CORP.) 1 April 1993  see page 3, line 17 - line 55 see page 3, line 63 - line 65; claims 1-21 ---	1-10,13, 15,16, 18,26,27
A	DE 43 23 234 A (BASF AG) 19 January 1995 see page 3, line 54 - page 4, line 8 see page 4, line 49 - line 58 see page 5, line 15 - line 39; claims 1-5 --- -/--	1,11,19



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 95 26209 A (THE PROCTER & GAMBLE COMPANY) 5 October 1995 cited in the application see page 21, line 19 - page 24, line 3; claims 1-15 ---	21-25, 28-39, 48-62
A	WO 96 15180 A (THE PROCTER & GAMBLE COMPANY) 23 May 1996 cited in the application see page 4, line 37 - page 6, line 1; claims 1-12 ---	40-47
A	PATENT ABSTRACTS OF JAPAN vol. 010, no. 208 (C-361), 22 July 1986 & JP 61 051007 A (MITSUBISHI CHEM IND LTD), 13 March 1986 see abstract -----	1,19

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